

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P112814/WO/1	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/DE2004/000653	International filing date (day/month/year) 29.03.2004	Priority date (day/month/year) 29.03.2003	
International Patent Classification (IPC) or national classification and IPC			
Applicant MTU AERO ENGINES GMBH			

<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>6</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>																									
<p>4. This report contains indications relating to the following items:</p> <table border="0"> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>		<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input type="checkbox"/>	Box No. II	Priority	<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input type="checkbox"/>	Box No. VII	Certain defects in the international application	<input type="checkbox"/>	Box No. VIII	Certain observations on the international application
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Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/DE2004/000653

Box No. I

Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-11 _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the claims:
- nos. 1-10 _____ as originally filed/furnished
- nos.* _____ as amended (together with any statement) under Article 19
- nos.* _____ received by this Authority on _____
- nos.* _____ received by this Authority on _____
- ☒ the drawings:
- sheets 1/1 _____ as originally filed/furnished
- sheets* _____ received by this Authority on _____
- sheets* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/DE2004/000653

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	6-10	YES
	Claims	1-5	NO
Inventive step (IS)	Claims		YES
	Claims	6-10	NO
Industrial applicability (IA)	Claims	1-10	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

- 1 This report makes reference to the following documents:

D1: US 4 326 940 A (ECKLES WILLIAM E ET AL)
27 April 1982 (1982-04-27)

D2: DE 100 42 002 A (BOSCH GMBH ROBERT) 14 March
2002 (2002-03-14)

D3: US 6 458 262 B1 (REID JONATHAN DAVID)
1 October 2002 (2002-10-01)

D4: WO 03/023395 A (MICROBAR SYSTEMS INC) 20
March 2003 (2003-03-20)

2 INDEPENDENT CLAIM 1

The present application does not meet the requirements of PCT Article 33(1) because the subject matter of claim 1 lacks novelty (PCT Article 33(2)).

Each of documents D1-D4 mentioned in the following paragraphs discloses a method for controlling at least one operating parameter of an electrolytic bath, in which the concentration of at least one

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
	<p>bath constituent is determined, in which, furthermore, the concentration values are processed in a control device to produce correcting variables, by which the operating parameter is modified in line with requirements, the concentration being determined by extracting a sample from the bath, exciting the sample by means of electromagnetic radiation and analysing the light spectrum emitted by the sample.</p> <p>2.1 Document D1 (column 2, line 10 - column 3, line 20; column 3, line 68 - column 4, line 9; column 9, lines 9-24; drawings) discloses a method for automatically controlling concentrations of additives in electroplating baths. The concentrations are determined with the aid of spectrophotometric detectors. This analysis method implicitly includes excitation of the sample using electromagnetic radiation. The measured values are used to control the addition of additives.</p> <p>2.2 Document D2 (paragraphs 8, 12, 13, 21) discloses a method for automatically controlling ion concentrations in a galvanic bath. The concentrations are determined at key points or continuously with the aid of a spectral photometer. A spectral analysis device analyses the extinction spectrum of a sample irradiated with light. The measured actual values are used to compare and set desired set-point values.</p>

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	<p>This means that any deviations in ion concentration in the electrolytes are compensated by the targeted dissolution of corresponding ions.</p> <p>2.3 Document D3 (column 2, line 45 - column 3, line 10; column 5, lines 6-38; column 7, lines 44-62; column 8, lines 36-57; column 9, lines 7-61, drawing) discloses a method for automatically controlling certain operating parameters (e.g. the bath composition) of electroplating baths. The concentrations of bath components are determined with the aid of a spectral photometer. Any deviations from the set-point value triggers regulation of certain operating parameters.</p> <p>2.4 Document D4 (page 8, lines 14-20) indicates that spectroscopic methods can be used for automatic real-time control of the bath composition of electroplating baths.</p> <p>3 INDEPENDENT CLAIM 7</p> <p>The present application does not meet the requirements of PCT Article 33(1) because the subject matter of claim 7 does not involve an inventive step (PCT Article 33(3)).</p> <p>Document D4 (page 8, lines 14-20; page 8, line 21 - page 10, line 20) indicates that spectroscopic methods can be used for automatic real-time control of the bath composition of electroplating baths. For this purpose document D4 proposes</p>

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Rahmen spectroscopy, which involves excitation of the sample with laser light. The subject matter of claim 7 differs from document D4 in that a control device is claimed which comprises means that permit spectral analysis of samples excited using laser light, whilst D4 discloses only the possibility of spectrally analysing electrolyte samples excited using laser light and not the use thereof in control devices. Since a method according to claim 1 is proposed in document D4 (cf. section 2.4 of this report and D4, page 8, lines 14-20) as well as the possibility of spectrally analysing electrolyte samples excited using laser light (D4, page 8, line 21 - page 10, line 20), the combination of said control device with the spectral analysis of electrolyte samples excited using laser light appears to be obvious and therefore non-inventive. The equipping of a known device according to D4, page 8, lines 14-20 (or according to one of documents D1-D3) with a new, improved or more suitable analysis device appears to be non-inventive.

4 DEPENDENT CLAIMS 2-6, 8-10

Claims 2-6 do not contain any features which, in combination with the features of any claim to which they refer, appear to meet the PCT requirements for novelty and inventive step.